**Newton’s Toy Box- Notes**

**Activity #1: Intro to Motion**

A **force** is a push or pull. Examples of a force are gravity, magnetism, friction, etc.

**Velocity** is speed in a particular direction. Altering the moving object’s speed and/or direction can change velocity.

An ***unbalanced external force*** changed the direction of the path of the sphere in activity #1. It was *unbalanced* because it was applied to only one side of the sphere. It was external because the force was applied to the *surface* of the sphere. This type of force is also called a **net force.**

**Newton’s first law of motion** states that an object will remain at rest or in uniform motion unless acted on by an unbalanced external force.

An object’s tendency to remain at rest or in motion is **inertia**. Newton’s firstlaw of motion is also called the **inertia principle.**